

**Notice of Allowability**

Application No.

10/537,472

Applicant(s)

OZAWA ET AL.

Examiner

Quochien B. Vuong

Art Unit

2685

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/03/2005.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 06/03/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

***Reasons for allowance***

1. Claims 1-6 are allowed over the cited prior art.
2. The following is an examiner's statement of reasons for allowance:

Regarding independent claims 1, 2, and 5, Pitzer et al. (US 6,876,710) disclose a phase-selective type frequency modulator or synthesizer (figures 1-1A) comprising: multiphase clock signal generating means (12) for generating N-phase clock signals having phase differences from each others; control means for sequentially activating one of first group of clock selection signals (26); edge detection means (32); and modulated clock signal generating means for selecting one clock signal from the N-phase clock signals (column 2, lines 9-24; column 3, line 45 – column 4, line 12; and column 6, line 51 – column 7, line 3). However, Pitzer et al. and the cited prior art fail to teach or fairly suggest the frequency modulator/synthesizer above further comprising edge appearance time adjusting means for adjusting a rising edge appearance and or a trailing edge appearance time of the first group of clock selection signals outputted from the control means to output second group of clock selection signals corresponding to the N-phase clock signals outputted from the multiphase clock signal generating means and wherein the modulated clock signal generating means selecting one clock signal in accordance with an activated state of the second group of clock selection signals outputted from the edge appearance time adjusting means.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

4. The information disclosure statement (IDS) submitted on 06/03/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nakamura et al. (US 3,835,404) disclose extracting circuit for reproducing carrier signal from a multiphase modulated signal.

Malm (US 4,023,103) discloses synchronizer for frequency hopping receiver.

Guidoux (US 4,229,825) disclose synchronizing circuit for a digital arrangement.

Co (US 2004/0196939) discloses all-digital phase modulator/demodulator using multi-phase clocks and digital PLL.


Ebuchi et al. (US 2005/0135505) disclose frequency modulation circuit.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B. Vuong whose telephone number is (571) 272-7902. The examiner can normally be reached on M-F 9:30-18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Quochien B. Vuong  
Jan. 23, 2006.

  
QUOCHIE B. VUONG  
PRIMARY EXAMINER